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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,649	07/07/2006	Karl Wilhelm Kramer	292811US0X PCT	5483
22850 7590 02/15/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER HANNAHER, CONSTANTINE	
			ART UNIT 2884	PAPER NUMBER
			NOTIFICATION DATE 02/15/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/585,649	<b>Applicant(s)</b> KRAMER ET AL.	
	<b>Examiner</b> Constantine Hannaher	<b>Art Unit</b> 2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060707</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **National Stage Application**

1. The Examiner acknowledges consideration of the International Preliminary Report on Patentability in International Application PCT/EP2005/000098. MPEP § 1893.03(e).

### **Information Disclosure Statement**

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, “the list may not be incorporated into the specification but must be submitted in a separate paper.” Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### **Oath/Declaration**

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It is not plainly and legibly written either by a typewriter or machine printer in permanent dark ink or its equivalent, as required under 37 CFR 1.52(a)(1)(iv).

It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing.

Once an Application Data Sheet is filed (as was submitted in this application on July 7, 2006) a declaration cannot be used to change any bibliographical data therein, 37 CFR 1.76(d)(4), so the completion of such data on a subsequently filed declaration is worthless. Nevertheless, the Office no

longer permits applicants to submit application papers that do not meet the standards set forth in the rules (37 CFR 1.52). See 61 Federal Register 161 of 19 August 1996, page 42793.

The Application Data Sheet submitted December 27, 2006 deliberately changes the identification of the priority country from Europe to France. No basis is supplied for changing the priority country. The certified copy of the priority document is identified by WIPO as filed in the European Patent Office and the document itself is consistent with that identification. The Examiner points out that the applicant is Swiss, not French.

#### **Specification**

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as “means” and “said,” should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, “The disclosure concerns,” “The disclosure defined by this invention,” “The disclosure describes,” etc.

Note the use of “The invention pertains to a...” and the requirement for brevity is a part of the PCT rules. Also note the use of “monocrystal” in the abstract.

5. The disclosure is objected to because of the following informalities: page 1, line 13 and page 4, line 11, “monocrystal”; page 2, line 3, “well know”; page 4, line 12, “polycrystalline”.

Appropriate correction is required.

#### **Claim Objections**

6. Applicant is advised that should claim 10 be found allowable, claim 30 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight

difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-21, 23-30, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Loef *et al.* (2002).

With respect to independent claim 1, van Loef *et al.* discloses a scintillating material (page 8483) which is within the scope of the recited formula because A=Rb, Cs, B=Li, M=La-Lu, X=Br, and there is a natural environment for the incorporation of Ce<sup>3+</sup> (page 8482). van Loef *et al.* further states that the lithium-containing elpasolite is a candidate for neutron sensitive scintillation. In the utter absence of any claim requirement for performance as a neutron detector, it would have been obvious to one of ordinary skill in the art at the time the invention was made to identify the formula

of van Loef *et al.* as a scintillating material for a neutron detector because in view of reaction (1) the results of the formula are predictable.

With respect to dependent claims 2-8, van Loef *et al.* identifies values for the recited “x” which anticipate the claimed range or make it obvious (page 8484) and identifies the production of monocrystals (page 8484) and the preparation of powders of various forms are known techniques recognized as the ordinary capabilities of one skilled in the art.

With respect to dependent claim 9, see page 8484.

With respect to dependent claim 10, which differs from claim 9 only in its use of rubidium rather than cesium, it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the material with rubidium as this is a pursuit of the known potential options (see page 8482) with a reasonable expectation of success in view of reaction (1).

With respect to independent claim 11, van Loef *et al.* makes the recited material formula obvious, see the rejection of claim 1. In the utter absence of any claim requirement for performance for neutron detection, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the material with the formula of van Loef *et al.* in a step of detecting neutrons because in view of reaction (1) the results of the formula are predictable.

With respect to dependent claims 12-20, see the rejection of claims 2-10.

With respect to independent claim 21, van Loef *et al.* discloses a material (page 8482) which is within the scope of the recited formula because A=Rb, B=Li, M=Y or Lu or La, and X=Br. As made plain by van Loef *et al.* there is a recognized need for optical, scintillation, and magnetic properties in elpasolites and they offer a natural environment for the incorporation of Ce<sup>3+</sup>. It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare

the material with the trivalent cerium as a dopant as this is a pursuit of the known potential options with a reasonable expectation of success.

With respect to dependent claims 23-30, see the rejection of claims 2-8 and 10.

With respect to independent claim 22, van Loef *et al.* discloses a material (page 8482) which is within the scope of the recited formula when  $z=0$  and  $L_n=Y$  but for the use of chlorine and bromine as the halide. As made plain by van Loef *et al.* there is a recognized need for optical, scintillation, and magnetic properties in elpasolites and a finite number of halides (“X=F, Cl, Br, I”). It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the  $Ce^{3+}$  doped material with iodine as this is a pursuit of the known potential options with a reasonable expectation of success.

#### **Response to Submission(s)**

10. The amendment filed February 27, 2007 has been entered. The Examiner cautions that the text in this amendment is a light gray and is subject to being found not to comply with 37 CFR 1.52.

#### **Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (571) 272-2437. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Constantine Hannaher/  
Primary Examiner  
Art Unit 2884**